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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,889	03/22/2004	Hiroshi Kobayashi	B-5406 621796-4	2389

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EXAMINER

BAKER, STEPHEN M

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,889

Applicant(s)

KOBAYASHI, HIROSHI

Examiner

Stephen M. Baker

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The disclosure is not consistent on the meaning of "action amount." Paragraphs 0010 and 0047 state that the "action amount" is a "speed" ("acting speed," "moving speed"), however paragraph 0048 implies the "action amount" is a displacement ("amount from ... position to ... position", "movement amount").

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 2003/0161735 to Kim *et al* (hereafter "Kim").

Kim discloses arrangements for correction of temperature-dependent errors in position sensor output. Kim's position sensor includes a magnetic core (10) connected to the object, such as a piston, whose position is to be sensed.

Using the language of the claims, the object whose position is to be sensed in Kim's arrangements is a "driven portion" for a "driving device" and the position sensor is an "action amount monitoring device" which monitors the "driven portion" by sensing the position of the core. Kim's arrangements further include an "information obtaining device" in the form of a temperature sensor. Kim's process for obtaining position measurement errors based on the measured temperature receives as input the measured temperatures ("obtained information") and produces as output a position error correction value ("action amount error"), and thus provides an "error detection device which refers to a different action amount error detection value according to a value related to the obtained information" thereby determining ("detecting") an "action amount error of the driven portion based on the action amount error detection value."

Regarding claims 2-5 and 7, Kim's temperature-dependent position correction is based on a measured non-linear relationship between temperature and position error that is programmed into a lookup table that reflects "a plurality of ranges" in having a plurality of entries, allowing "switching (look-up addresses) ... according to variation (of temperature)."

4. Claims 1, 2, 4, 5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,269,284 to Lau *et al* (hereafter "Lau").

Lau discloses arrangements using a programmed computer for temperature-dependent correction of position errors for a CNC machine tool.

In the language of applicant's claims, Lau's machine tool tip serves as a "driven portion" moved by a "driving device." Lau's arrangements include an "information obtaining device" in the form of a temperature sensor.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

Kim does not disclose programming a computer to perform the table-lookup process. Official Notice is taken that using a programmed computer to perform logic operations including table-lookup operations was conventional, having well-known advantages, at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Kim's table-lookup and position error correction by means of a programmed computer. Such an implementation would have been obvious because using a programmed computer to perform logic operations including table-lookup operations was already conventional, having well-known advantages.

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7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lau.

Lau does not disclose expressing the thermal model by means of a "table."

Official Notice is taken that using look-up tables to express variable relationships was conventional at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Lau's temperature-dependent error value generation by means of a lookup table. Such an implementation would have been obvious because using look-up tables to express variable relationships was already conventional.

Allowable Subject Matter

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (571) 272-3814. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stephen M. Baker
Primary Examiner
Art Unit 2133

smb

